

CLAIMS

What is claimed is:

1. A digital, wireless PC/PCS modem for communicating to a wireless communication system, said modem comprising:

5 a PCMCIA card type configuration of a type associated with a laptop computer unit supporting a circuit board;

a modem integrated within said circuit board in communication with said PCMCIA card;

10 an antenna having a protective cap and tuned to a frequency of a corresponding wireless system for transmitting and receiving digital signals and sending them to said circuit board to be processed; said antenna attached to said modem using a swivel joint assembly that allows for said antenna to be rotated and aligned to provide optimum transmission and reception of digital signals unlimited with respect to a user's locale;

15 a swivel-based, independent micro camera rotatable 180°;

a microphone for converting a transmitted sound into a sound signal; and

a loudspeaker for generating an audible sound in response to reception of digital signals; and wherein said loudspeaker and said microphone are coupled to a microprocessor via an audio interface block.

2. The digital, wireless PC/PCS modem for communicating to a wireless communication system as described in Claim 1, wherein said corresponding wireless communication system is defined as a satellite link and relay wireless communication system.

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3. The digital, wireless PC/PCS modem for communicating to a wireless communication system as described in Claim 1, wherein said modem is supplied in the standard shape, size and configuration to match the PCMCIA standards as developed by the computer industry.

4. The digital, wireless PC/PCS modem for communicating to a wireless communication system as described in Claim 1, wherein said loudspeaker and said microphone are coupled to a microprocessor via an audio interface block.

5. The digital, wireless PC/PCS modem for communicating to a wireless communication system as described in Claim 3, wherein said modem includes an enclosure top held in place by a series of fastening means, and wherein said enclosure top is removable so as to allow for repair or adjustment of any internal electronic components located inside said modem.

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6. The digital, wireless PC/PCS modem for communicating to a wireless communication system as described in Claim 5, wherein said modem has an electrical connector comprising a series of electrical contacts, wherein said electrical connector is of an arrangement as defined by computer industry for PCMCIA connections.

7. The digital, wireless PC/PCS modem for communicating to a wireless communication system as described in Claim 1, further comprising:

at least three tuner cards for providing a multi-task video screen split into a plurality of frames of equal dimension, wherein each of said frames providing for a specific functional operation, task, or application.

8. The digital, wireless PC/PCS modem for communicating to a wireless communication system as described in Claim 7, wherein said tuner cards being nine in number, and wherein said frames being nine in number.

9. The digital, wireless PC/PCS modem for communicating to a wireless communication system as described in Claim 7, wherein said functional operations and transmissions include video, voice, text, fax, and viewing of satellite television broadcast; and wherein said functional operations and

transmissions being simultaneously displayed via said multi-task video screen.

10. An integrated PC/PCS digital wireless modem for communicating to a wireless communication system, said modem comprising:

5 a PCMCIA card type configuration of a type associated with a laptop computer unit supporting a circuit board;

a modem integrated within said circuit board in communication with said PCMCIA card;

10 an antenna having a protective cap and tuned to a frequency of a corresponding wireless system for transmitting and receiving digital signals and sending them to a circuit board to be processed; said antenna attached to said modem using a swivel joint assembly that allows for said antenna to be rotated and aligned to provide optimum transmission and reception of digital signals unlimited with respect to a user's locale;

15 a swivel-based, independent micro camera rotatable 180°;

a microphone for converting a transmitted sound into a sound signal; and

a loudspeaker for generating an audible sound in response to reception of digital signals, and wherein said loudspeaker and said microphone are coupled to a microprocessor via an audio interface block; and

20 at least three tuner cards.

11. The integrated PC/PCS digital wireless modem for communicating to a wireless communication system as described in Claim 10, wherein said tuner cards being nine in number for providing a multi-task video screen split into nine frames of equal dimension, wherein each of said nine frames providing for a specific functional operation, task, or application such as video, voice, text, fax, and viewing of satellite television broadcast.

12. A method for satellite link and relay wireless communication utilizing a digital, wireless PC/PCS modem in combination with laptop computer unit or a personal home computer comprising:

digital signals transmitted via satellite link and relay wireless system are received by an antenna and passed from said antenna through a series of line amplifiers, said series of line amplifiers and a network switching element having an input buffer coupled therebetween, wherein said network switching element receives input from said PC/PCS modem, said switching network element having frequency/feedback along with channel/screen selection function flowing from said switching network bi-directionally to a multi-tuner module where data is passed from said multi-tuner module to a microprocessor, wherein said data is then passed on to a universal asynchronous receiver transmitter via a first bi-directional path, wherein said universal asynchronous receiver transmitter being

responsible for all data transfers from a computer system to the computer system's modem output system, whereby data transfer occurs between all modules through a series of parallel bus, a series of serial transmit bus and a series of serial receive bus.

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13. The method for satellite link and relay wireless communication utilizing a digital, wireless PC/PCS modem in combination with laptop computer unit or a personal home computer described in Claim 12, further comprising a micro controller for aligning said data in a proper configuration to be processed by a voice, data, fax and video processor through a second parallel bus, second serial transmit bus and second serial receive bus, wherein said voice, data, fax and video processor includes a digital signal processing support module used as a prebuffer into a digital signal processor, and wherein said digital signal processor performs all necessary operations on said data, including handshake verification, through a series of built-in algorithms.

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14. The digital, wireless PC/PCS modem for communicating to a wireless communication system as described in Claim 1, wherein said modem is hingedly attached as a free end of a cellular telephone unit, wherein said free end has an electrical connector comprising a series of electrical contacts, and wherein said

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- 24 -

free end is scaled so as to insertably engage a PCMCIA card slot being dimensionally configured to match PCMCIA standards as developed by computer industry.

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